

**1. Rejection of Claims 1, 11, 17, 24, 31-33, 38, 40-41 and 43  
under 35 U.S.C. § 112, ¶ 1**

The Office Action rejects claims 1, 11, 17, 24, 31-33, 38, 40-41 and 43 under 35 U.S.C. § 112, ¶ 1 as being based on a disclosure which is not enabling. The Office Action states:

The presence of magnesium in the claimed compound appears to be critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). See applicant's remarks in the paragraph bridging pages 4 and 5 in the last amendment.

The Minagawa Declaration filed under Rule 132 has been considered, but is not convincing of error in the rejection, since applicant's claims have not been amended to require the presence of magnesium. It appears from applicant's specification that the inclusion of magnesium is required to provide a chemical composition exhibiting a single diffraction peak at  $2\theta = 33$  to  $50^\circ$ .

Applicant's argument, that claim 1 has been amended to contain the presence of magnesium.

Applicants respectfully traverse the rejection. However, for the sole purpose of advancing prosecution, Applicants amend claim 1 to recite " $0 < a$ " thereby requiring that magnesium be present in the claimed formula (1).

Applicants reiterate the previous arguments made in the Response of January 22, 2004. In particular, a *prima facie* case of obviousness has not been established because the prior art fails to

provide any suggestion or motivation to combine Zn and Mg. The previously filed Minagawa Declaration clearly shows that the presently claimed invention has a completely new crystalline structure exhibiting a single X-ray diffraction peak in a region where  $2\theta$  is 33 to 50° and in a region where  $2\theta$  is 60 to 64°. This feature unexpectedly translates into an excellent additive for resins, heat insulators and anion exchangers.

As notes above, claim 1 has now been amended to recite the limitation of " $0 < a$ " thereby specifically including magnesium.

Accordingly, Applicants respectfully submit that the presently claimed invention is patentable and fully enabled by the specification and respectfully request reconsideration and withdrawal of the rejections of claims 1, 11, 17, 24, 31-33, 38, 40-41 and 43 under 35 U.S.C. § 112 ¶ 1.

### **CONCLUSION**

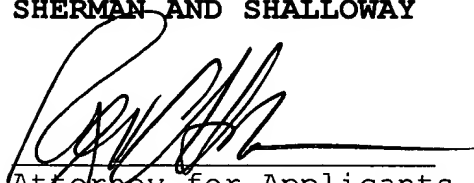
In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is

earnestly solicited.

Respectfully submitted,

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Attorney Docket No. SPO-590  
MAIL STOP AMENDMENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ) Group Art Unit: 1754  
)  
KOMATSU; ISHIDA; IGARASHI; ) Examiner: Wayne A. Langel  
KONDO; MINAGAWA; SATO; SATO )  
)  
Serial No. 09/786,427 )  
)  
Filed: March 06, 2001 )  
  
For: ZINC-MODIFIED COMPOSITE POLYBASIC SALT, METHOD  
OF PREPARING THE SAME AND USE THEREOF

Appendix A

Please amend the following claims according to 37 C.F.R. §  
1.121 concerning a manner for making claim amendments.

1. (Currently amended) A composite metal polybasic salt  
having a chemical composition represented by the following  
general formula (1),



wherein  $\text{M}^3$  is a trivalent metal, A is a sulfuric acid ion,  
and a, b, x, y and z are numbers satisfying the following  
formulas,

i)  $0 < a$  ,  $0 < b$

ii)  $3x + 2(a + b) - y - mz = 0$  (wherein m is a  
valency of anion A),

iii)  $0.3 \leq (a + b)/x \leq 2.5$ ,

iv)  $1.5 \leq y/(x + a + b) \leq 3.0$ , and

v)  $4.0 \leq (x + a + b)/z \leq 20.0$ , and

n is a number of not larger than 7, exhibiting diffraction peaks at  $2\theta = 2$  to  $15^\circ$ ,  $2\theta = 19.5$  to  $24^\circ$ , a single peak at  $2\theta = 33$  to  $50^\circ$ , and a single peak at  $2\theta = 60$  to  $64^\circ$  in the X-ray diffraction (Cu- $\alpha$ ).

Claims 2-10 (Canceled)

11. (Previously presented) A method of preparing the composite metal polybasic salt of claim 1 by reacting a sulfuric acid salt of a trivalent metal with an oxide, a hydroxide or a sulfuric acid salt of zinc or zinc and magnesium, under the conditions of a pH of from 3.8 to 9.0 and a temperature of not lower than  $50^\circ\text{C}$ .

Claims 12-16 (Canceled)

17. (Previously presented) A composite metal polybasic salt according to claim 1, wherein the trivalent metal ( $M^3$ ) in said formula is aluminum.

Claims 18-23 (Canceled)

24. (Previously presented) A composite metal polybasic salt according to claim 1, which has a laminate asymmetric index ( $I_s$ ) defined by the following formula (2),

$$I_s = \tan\theta_2 / \tan\theta_1 \quad \text{--- (2)}$$

wherein  $\theta_1$  is an angle subtended by a peak perpendicular in the X-ray diffraction peak of a predetermined spacing and a peak tangent on the narrow angle side, and  $\theta_2$  is an angle subtended by the peak perpendicular at the above peak and a peak tangent on the wide angle side, which is not smaller than 1.5 at a peak of  $2\theta = 33$  to  $50^\circ$ .

Claims 25-30 (Canceled)

31. (Previously presented) An additive for resins comprising a composite metal polybasic salt according to claim 1.

32. (Previously presented) A heat insulator comprising a composite metal polybasic salt according to claim 1.

33. (Previously presented) An anion exchanger comprising a composite metal polybasic salt according to claim 1.

Claims 34-37 (Canceled)

38. (Previously presented) A composite metal polybasic salt obtained by ion-exchanging the sulfuric acid anion in the composite metal polybasic salt of claim 1 with at least one anion selected from the group consisting of a carbonic acid ion, silicic acid ion, an organopolycarboxylic acid ion and a phosphoric acid ion.

39. (Canceled)

40. (Previously presented) An additive for resins comprising a composite metal polybasic salt according to claim 38.

41. (Previously presented) A heat insulator comprising a composite metal polybasic salt according to claim 38.

42. (Canceled)

43. (Previously presented) A method of preparing the composite metal polybasic salt of claim 38 by executing the ion-exchange of the sulfuric acid anion of the composite metal polybasic salt of claim 1 in the presence of at least one acid selected from the group consisting of a carbonic acid, a silicic acid, an organocarboxylic acid and a phosphoric acid, or a soluble salt thereof.